1790 (086.0)

January 12, 2001

Address

RE: Decision and Protest Period for the Upper Nestucca Restoration and Enhancement Project

Name:

The Bureau of Land Management (BLM) is proposing to implement Alternative 2 which was analyzed in EA (Environmental Assessment) No. OR-086-00-02. This alternative will entail: 1/the replacement of the culvert at Ginger Creek in the upper Nestucca River Watershed with a new structure designed to pass both fish and a 100-year storm event; 2/ The restoration and enhancement of up to 9.5 miles of stream channel through the addition of large wood and rock by strategic placement by helicopter, heavy equipment or hand powered tools over an estimated five year period; and 3/ Planting of native vegetation in access locations and in riparian areas. The project is approximately 13 air miles southeast of Tillamook Oregon, in Tillamook and Yamhill Counties, on land managed by the Tillamook Field Office of the Salem District, Bureau of Land Management.

Enclosed for your review is the Decision Record and Finding of No Significant Impact for the Upper Nestucca Restoration and Enhancement Project EA, Appendix 7 to the EA and an Errata. Appendix 7 contains the BLM's response to comments received during the 30 day public comment period to EA. The Errata contains a couple of minor changes to the previously stated EA.

Enclosure:(3)
Decision Record and Finding of No Significant Impact

For additional information about this decision, BLM protest process or to receive another copy of the EA, contact Katrina Symons at the Tillamook Field Office, 4610 Third Street, P.O. Box 404, Tillamook, Oregon 97141-0161; telephone (503) 815-1100.

Sincerely,

Dana R. Shuford
Field Manager

Appendix 7
Errata

DECISION RECORD

and

FINDING OF NO SIGNIFICANT IMPACT

for

Upper Nestucca Restoration and Enhancement Project

Environmental Assessment Number OR-086-00-02

USDI - Bureau of Land Management
Oregon State Office
Salem District
Tillamook Field Office
Tillamook and Yamhill Counties, Oregon

BACKGROUND

An IDT (interdisciplinary team) was assigned to analyze a proposal to conduct fish habitat enhancement in 7 to 9.5 stream miles of a 17 mile river reach in the upper Nestucca watershed on lands managed by the Tillamook Field Office, Salem District, BLM (Bureau of Land Management). The project area[1] is located along the Nestucca River and in Bear, Elk and Ginger Creeks within portions of Township 3 South, Range 7 West, Township 4 South, Range 6 West and Township 3 South, Range 6 West Willamette Meridian. The IDT conducted the environmental analysis and documented it in Environmental Assessment (EA) number OR-086-00-02.

Since the release of the EA, the IDT has identified the need to correct one element of the environment contained in Appendix 2, Table 2. This change to the EA is contained in an Errata, dated January 12, 2001, and does not notably alter the analysis, nor the determination of effects as presented in the June 9, 2000 EA.

A copy of the EA and Errata can be reviewed at or obtained from the Tillamook Field Office, P.O. Box 404, 4610 Third Street, Tillamook, Oregon 97141. Office hours are Monday through Friday, 7:30 A.M. to 4:00 P.M., closed on holidays. These documents are also available via the internet: www.or.blm.gov/salem/html/planning/index.htm.

The decision to be made by the Tillamook Field Manager is whether or not to prepare an environmental impact statement, and whether to approve the fish habitat enhancement project as

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[1] The instream portion of work will occur in the Nestucca Watershed, however the identified blowdown patches (a source of large wood/trees) are within the Willamina Creek Watershed.

proposed, not at all, or to some other extent.

DECISION

Based on site-specific analysis, the supporting project record and management recommendations contained in the *Nestucca Watershed Analysis* (WA), dated October, 1994, and *Salem District Resource Management Plan* (RMP), I have decided to implement the fish habitat enhancement project described in Alternative 2, hereafter known as the "selected alternative." This decision includes:

1. Replace the Ginger Creek culvert with a drainage structure designed to pass anadromous and resident fish at all their life stages and to pass a 100 year flood event and associated bedload.

2. Implement instream restoration and enhancement as described in the EA, which includes 7 to 9.5 miles of active placement of large wood and rock to provide increased structure to these stream channels and enhance fish passage. Source locations for the large wood/trees will include the identified blow down patches and onsite trees that fit within the criteria discussed in the EA[2]. Due to concerns for water quality, the implementation of these actions will be carried out using a helicopter for tree/log delivery to the stream channel to the largest extent feasible, with funding being the major concern for the use of helicopters. Use of helicopters for the section of Bear Creek is a necessity. In the other portions analyzed, helicopter use is the most preferred method of tree/log delivery, but may not be cost effective at all sites.

   The Field Office fish biologist will coordinate with the wildlife biologist to select those trees to be felled with an emphasis in the retention of the largest-diameter trees and/or those with large branches, and in not creating gaps in the riparian canopy. Felling of trees is anticipated to be implemented within 5 years from the effective date of this decision and would generally occur between August 6 and September 15, with a possible extension beyond September 15 if a waiver is obtained from Oregon Department of Fish and Wildlife (ODFW). Between August 6 and September 15, any generation of noise above the ambient level including felling of trees will be restricted to the daily time period between two hours after sunrise to two hours before sunset.

3. In order to provide shade and future wood input into the system, natural tree regeneration will be supplemented on approximately 7 acres located along the stream channel from the stream edge mostly out to about 30 to 50 feet and occasionally out to about 100 feet by planting a mixture of native trees and shrubs, including red alder, cottonwood, willow, Oregon Ash, bigleaf maple, ninebark, Douglas-fir, western redcedar, grand fir and others. Planting is anticipated to occur within 5 years from the effective date of this decision.

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[2] The criteria for onsite tree selection is contained on page 19 of the EA and was refined during discussions with USFWS (United States Fish and Wildlife Service). The refined criteria is contained in the BLM Biological Assessment which was reviewed and accepted by Interagency Level 1 Team (Project Record # 24)

Should site preparation occur between August 6 and September 15, noise generating activities above the ambient level will be restricted to the daily time period between two hours after sunrise to two hours before sunset.

4. To document habitat indicators change through time a monitoring plan (Project Record Document 13) will be implemented as funding and staff time allow.

5. Other required design features are listed below.

Ginger Creek (Project 1)

1. Conduct in-stream work between July 1 and September 15, the time period with the least impact to fish. These dates meet ODFW "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources, January 1997".
2. Conduct out-of-stream work during periods of low soil moisture, usually between June 15 and October 31.
3. Temporarily divert stream water around work areas to minimize sedimentation during construction.
4. Remove fill material around existing culvert; stock pile material needed for back filling excavations; place unsuitable and excess material in a pre-approved waste area located above the 100-year floodplain; and minimize compaction of waste material.
5. Place fill material over new culvert; use material from pre-approved borrow sites.
6. Use sediment traps and other devices as needed during construction activity to reduce sediment delivery into the stream.
7. All exposed soils will be stabilized and seeded or planted with native species upon completion of construction activities.

Instream Work (Projects 2- 6)

8. Confine heavy equipment to designated access trails, and log and boulder drop locations prior to implementation.
9. Limit construction activities in sensitive areas as necessary.
10. Fell only a few trees in any one area in such a manner to not create gaps in the riparian canopy.
11. Construct water bars or dips on potential flow paths.
12. Upon completion of construction activities, all exposed soils will be stabilized and seeded or planted with native species.
13. Clean equipment of grease oil and dirt before movement into project area and check daily for leaks while in operation.
14. Install oil collection booms downstream of project areas and have an approved spill cleanup kit on site.
15. Fuel any machinery outside of the riparian zone on hardened surfaces (roads, pullouts).

Wildlife

16. Undisturbed conditions, including associated low level aircraft operations, will be

maintained within the Elk Creek ACEC (Area of Critical Environmental Concern) between January 1 and August 15. This time period may be waived after June 1, if bald eagle nesting has failed or no nesting activity occurs.

Permits and Surveys

17. All required permits will be obtained and surveys conducted to protocol prior to implementation. The terms and conditions of said permits will be incorporated into the design of the project. Likewise, known sites will be managed in accordance with Survey and Manage Standards and Guidelines.

ALTERNATIVES CONSIDERED

The alternatives considered in detail included the required "no action" alternative, the proposed action alternative which initiated the environmental analysis process, and one other action alternative that addressed the major issue (fish and fish habitat) and was responsive to the purpose and need for action. A complete description of the alternatives are contained in the EA, chapter 2.

REASONS FOR THE DECISION

Considering public comment, the content of the EA and supporting project record, the management recommendations contained in the WA, and the management direction contained in the RMP, I have decided to implement the selected alternative as described above. My rationale for this decision follows:

1. The selected alternative (alternative 2) addresses the identified purpose and need for action in that it rehabilitates and protects at-risk fish stocks and their habitat (EA, Chapter 1,3 and Appendices 4-5). Although alternative 3 partially addresses the purpose and need for action, it does not eliminate the potential for greater impacts to fisheries and water quality. Specifically fish passage is compromised at the Ginger Creek culvert, as is its ability to pass water and bedload during a 100 year flood event. If the culvert is not replaced, it will likely fail resulting in adverse downstream impacts to fish and fish habitat (EA p. 40). As such, alternative 3 was not selected. The “no action” alternative was not selected because it does not address the purpose and need for action. The 7 to 9.5 miles identified in the Upper Nestucca Watershed would remain deficient in large woody debris, which is directly related to the poor width to depth ratio and lack of pool quantity and quality, lack of adequate fish passage and open canopy areas would remain unplanted (EA, chapter 3).

2. The selected alternative is consistent with applicable land use plans, policies, and programs (EA, chapter 3.7).

3. The selected alternative will help support the maintenance of the long-term viability of

the Oregon Coast coho salmon and other fish species found in the Upper Nestucca River and its tributaries (EA, Chapter 3). The long-term beneficial effects to fish and their habitat include helping to restore sediment storage and routing processes, improve substrate composition, improve pool quantity and quality, improve the stream width to depth ratio, restore floodplain connectivity, and potentially reduce water temperature through shading (EA, Chapter 3 and Appendices 4-5). Although the selected alternative is expected to have immediate adverse effects to fish as a result of adding wood or rocks to the stream (i.e. short-term increase in turbidity, death or injury to individual fish), the high probability of both short-term (within one year) and long-term beneficial impacts, as previously noted, far outweigh the predicted immediate adverse impacts. The "no action" alternative was not selected because the long-term viability of fish species, particularly those with downward trends such as coho and steelhead, may be compromised without active management at this time in the Upper Nestucca Watershed (EA, Chapter 3, Appendix 4-5).

4. The selected action maintains, restores or does not retard the attainment of all nine of the ACS (Aquatic Conservation Strategy) objectives. Although alternative 3 maintains and restores most of the ACS objectives, it was not selected because the attainment of ACS objectives 4 and 5 maybe retarded if the Ginger Creek culvert fails and ACS objective 2 will remain retarded if it is maintained in its current condition. Likewise, the "no action" alternative maintains and does not prevent the attainment of all the ACS objectives, except objectives 4 and 5, for which attainment maybe retarded if the Ginger Creek culvert fails and ACS objective 2 remains retarded if it is maintained in its current condition (Appendix 5). As such, the "no action" alternative was not selected.

5. Although the selected alternative does not resolve the major issue as discussed in footnote 4 on page 6 of the EA, it does contain a provision to minimize the amount of equipment use in the stream channel by the use of a helicopter to the greatest extent feasible. Alternative 3 resolves the major issue, but does not address the purpose and need for action as well as the selected alternative, and may even retard or prevent the attainment of several ACS objectives. Alternative 2 will have more beneficial effects in both the short- and long-term than would Alternative 3 (EA Appendix 4 and 5). As such alternative 3 was not selected.

6. The selected alternative will improve habitat condition for listed fish while having a minor effect on late-successional associated species due to the project's design features which eliminate or minimize the potential for impacts to the constituent elements of critical habitat. Specifically, the streamside stands and the blow down patches would continue to function as habitat for terrestrial wildlife species and design features to minimize the potential for disturbance have been incorporated, i.e. seasonal and daily time restrictions (Chapter 3).

7. The Tillamook Field Office wildlife biologist determined the selected alternative would have *"No Effect"* on marbled murrelet critical habitat. During the Endangered Species Act (ESA) consultation process the Interagency wildlife Level 1 Team, utilizing the same

information as the Tillamook Field Office biologist, found that the selected alternative *"May Affect"* marbled murrelet critical habitat. Although these wildlife biologists disagree on the ESA call, there is agreement that the selected alternative will not result in adverse modification of marbled murrelet critical habitat.

8. The selected alternative (projects 2-7 as described in the EA) will likely cost $200,000 and may require some further maintenance at year 5-10 and very likely by year 20 amounting to another $40,000 to $80,000 once during those years. The non-monetary benefits that these types of projects provide include nutrient cycling, protection and improvement of overwintering habitat for coho, steelhead, cutthroat trout and lamprey (Pacific/and river), teaching opportunities, aesthetic value and an increase in the number of smolts that rear through the winter and make their way to the ocean. The monetary benefit that these kinds of projects can claim is increased recreation opportunities, sport and commercial harvest. An increase in the percentage of presmolts that successfully overwinter is a success that can already be claimed by our past projects and should be fully expected in these selected projects as well. Additionally and without regard to listed, Bureau status or endemic fishes, these projects contribute to the attainment of ACS objectives and would be a viable project by that standing alone. The predicted expense of these projects are expected to provide many returns both in the form of physical objects (e.g., habitat components, numbers of fish) and more importantly in improving the long-term viability of several genetically distinct fish populations (EA Chapter 3 pg. 29).

PUBLIC INVOLVEMENT

In compliance with NEPA, the proposed action was listed in the June, September and December 1998, March and June 1999 and February 2000 editions of the Salem District Project Update newsletter which was mailed to over 1000 addresses; a letter mailed on May 12, 1999 to potentially affected and/or interested individuals, groups, and agencies (Project Record, Document 4); and two tours were conducted of the proposed project areas for the interested public (Project Record, Document 10) and by the request of the combined Level 1 Team along with other interested agency members (Project Record, Document 11). A total of four letters and oral responses were received as a result of this scoping[3]. All public input was assigned a number and filed in the Project Record. The IDT reviewed, clarified, and assessed the public comments. The disposition of those comments was approved by the responsible official. Fish and fish

[3] Public comments, in response to public scoping, included a question of the need to implement projects in the Nestucca River, the use of equipment in the stream channel, input of sediment from the Bear Creek rotational slide, the need for monitoring, sources of large wood and a concern about the elimination of hardwoods from riparian zones. These questions, comments or concerns are discussed within the EA as appropriate. The question of equipment in the stream channel along with IDT input, identified the work at the Ginger Creek culvert and equipment in the stream channel as elements of the major issue.

habitat[4] was the only major issue identified and was used to guide the environmental analysis contained in the EA.

On June 9, 2000, a pre-decision letter along with a copy of the EA and draft Finding of No Significant Impact (FONSI) was mailed to six interested individuals, groups and agencies (Project Record, Documents 14, 15). Additionally, a notice for public comment appeared in the Headlight Herald on June 14, 2000 (Project Record Document 23). The end of the 30 day public comment period was 4:00 P.M., July 14, 2000.

As a result of the notice for public comment to the EA and draft FONSI , four letters were received (Project Record, Documents 19, 20, 21, 22). All public input was assigned a number and filed in the Project Record. The BLM response to those comments are contained in Appendix 7 (see attachment) and was considered by the Tillamook Field Manager in reaching a final decision for this project.

FINDING OF NO SIGNIFICANT IMPACT

Based upon review of the EA and supporting project record, I have determined that the selected alternative is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27. Therefore, an environmental impact statement is not needed. This finding is based on the following discussion:

Context. The selected alternative is a site-specific action directly involving 7 to 9.5 stream miles within a 17 mile river reach in the Upper Nestucca Watershed and three patches of blowdown timber (~9 acres) in the Willamina Creek Watershed on BLM administered land that by itself does not have international, national, region-wide, or state-wide importance. The in-water project area falls within the Evolutionarily Significant Unit (a distinct population segment) of Oregon Coast coho salmon which are listed as threatened under the Endangered Species Act and have designated critical habitat throughout most of this watershed. The project area includes other anadromous fish species (i.e., steelhead, chinook salmon and cutthroat trout). Within the

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[4] The fish and fish habitat Major Issue was developed by the IDT using both public comments and specialist input (Fisheries, Water and Soils) and accepted by the responsible official. The major issue arose out of concern for water quality and its potential impacts on fish or fish habitat resulting from the replacement of the Ginger Creek culvert and the operation of equipment instream. Issue Statement: The proposed use of equipment in the stream channel will increase the turbidity in the short term (several hours) which may have a detrimental effect on fish species and habitat. Potential impacts range from avoidance to mortality of individuals. In addition, with equipment in the stream channel there is the potential for fuel or oil to enter the stream which may negatively affect water quality, fish habitat or fish.

Willamina Creek Watershed Upper Willamette Steelhead are present and listed as threatened under the Endangered Species Act and have designated critical habitat throughout most of this watershed. Coho, cutthroat trout and other fish species are also found in this watershed. The discussion of the significance criteria that follows applies to the intended action and is within the context of local importance. Chapter 3 of the EA details the effects of the selected alternative. None of the effects identified, including direct, indirect and cumulative effects, are considered to be significant.

Intensity. The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27.

1. **Impacts may be both beneficial and adverse.** Due to the selected alternative's design features, the following environmental effects are predicted: 1/ The felling, pulling or delivery of trees into stream/river channels in the Upper Nestucca watershed will create a short-term increase in turbidity/suspended sediment levels in the immediate project area. These increases are expected to be minimal and of short duration, usually dissipating in a few minutes. (EA, Chapter 3 pg. 42); 2/ Long-term beneficial effects to fish and their habitat by planting trees along stream channels and placement of large wood and rock in streams to restore sediment storage and routing processes, improve substrate composition, improve pool quantity and quality, improve the stream width to depth ratio, restore floodplain connectivity, and reduce water temperature (EA, chapter 3 pg. 43, Appendices 4-5); 3/ Although the felling or placement of trees or rocks in project areas in the Upper Nestucca Watershed has the potential for adverse effects to fish (e.g., a felled tree could strike a fish), the continued existence of the Oregon Coast coho salmon, listed as threatened under the ESA (Endangered Species Act), will not be imperiled, and the action will result in increased population viability for species of fish found in the Upper Nestucca Watershed. Within the Willamina Creek Watershed there will be no loss of population viability for any fish species (EA, Chapter 3 pg. 29); 4/ The selected alternative will contribute to the attainment of the ACS objectives (EA, Chapter 3 pg. 27, Appendix 5); 5/ The selected alternative will not negatively impact Bureau sensitive and special attention plant species as known sites will be protected as required by management recommendations and noxious weeds increases should be minimal as canopy cover and active planting of native species will occur directly after disturbance (EA, Chapter 3 pg. 32); 6/ Based upon the generation of noise above the ambient level within 0.25 mile of unsurveyed suitable habitat, the selected alternative "May Affect-Not Likely to Adversely Affect" the spotted owl. The selected alternative "May Affect" spotted owl designated critical habitat by removal of the blowdown timber. The selected alternative is expected to have "No Effect" on marbled murrelet designated critical habitat however, due to the generation of noise above the ambient level within 0.25 mile of unsurveyed suitable habitat, is considered a "May Affect-Likely to Adversely Affect" action on the marbled murrelet. *(Note: Upon reviewing the project pursuant to the Endangered Species Act, the interagency wildlife Level I Team concluded that a "May Affect" call upon marbled murrelet designated critical habitat was appropriate. The Level 1 Team's finding was primarily a result of the potential for some minor positive and negative impacts to suitable habitat. Although the Level 1 Team's finding is based upon*

the same impacts considered by the Field Office Staff Biologists, the Field Office biologist considered these impacts to be of such a negligible, inconsequential nature that a "No Effect" call upon critical habitat was appropriate, especially when considering the incorporated design features and what is known of stand characteristics in the vicinity of known murrelet nest sites). The selected alternative is considered "May Affect-Not Likely to Adversely Affect" on bald eagles due to the expected beneficial effect of improved fish stocks resulting in greater foraging opportunities.(EA, Chapter 3 pg. 48); 7/ The selected alternative will not negatively impact (elevate the level of concern) any wildlife Survey and Manage, Special Status, or Species of Concern (EA, Chapter 3 pp. 50-53); 8/ Impacts to soils under the selected alternative are minor as less than an acre of ground is expected to be disturbed by the creation of access trails. Beneficial effects of storage and routing of instream sediments and wood pieces will occur when the Ginger Creek culvert is replaced and large wood and rock are added to stream segments. The removal of the blowdown timber especially if done by helicopter or yarder during the dry season will have minimal to small impacts respectively to soils (EA Chapter 3 pg. 37); and 9/ Impacts to water quality under the selected alternative will be of short duration (less than 2 hours at any site) and they will be separated both in time and area, precluding cumulative effects (EA Chapter 3 pg. 42).

None of the environmental effects disclosed above and discussed in detail in Chapter 3 of the EA are considered significant.

2. **The degree to which the selected alternative will affect public health or safety.** Public health and safety was not identified as an issue. This fish habitat enhancement project is comparable to other fish habitat improvement projects which have occurred within the Tillamook Field Office with no unusual health or safety concerns.

3. **Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wild and scenic rivers, or ecologically critical areas**. There are no historic or cultural resources, park lands, prime farm lands, wild and scenic rivers, or wildernesses located within the project area.

   The Nestucca River is considered suitable for inclusion in the National Wild and Scenic River System with a tentative classification of "Recreational River Area" and is a state designated scenic waterway. The selected alternative protects the outstanding and remarkable values identified for this recreational river area and is consistent with the pertinent regulations concerning the State Scenic Waterway Act. (EA, Appendix 2).

   A portion of the project area is located within the Riparian Reserve land use allocation, as identified in the RMP. The instream project area also falls within an Evolutionarily Significant Unit, as previously stated. Activities associated with the fish habitat enhancement project are predicted to contribute to the attainment of ACS objectives. (EA, chapter 3 pg. 27, Appendix 5). Additionally, the selected alternative is predicted to help sustain or improve the long-term viability of the Oregon Coast coho salmon and the other fish species found in the Upper Nestucca Watershed (EA, Chapter 3 pg. 29).

   Two ACECs (Areas of Critical Environmental Concern), Nestucca River ACEC and Elk Creek ACEC, are located within the selected alternatives 17 mile river reach in the Upper

Nestucca Watershed. The selected action is consistent with the management plans for these two ACEC (EA Chapter 3.7).

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** The effects of the selected alternative on the quality of the human environment are adequately understood by the IDT to provide analysis for this decision. A disclosure of the predicted effects of the selected alternative is contained in the EA, chapter 3, Appendix 4-5. Four letters were received in response to the notice of public comment to the EA and draft FONSI. The BLM's response to those comments are contained in Appendix 7 of the EA (also see Intensity Criteria #1 for discussion of predicted effects to marbled murrelet critical habitat).

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** The selected alternative is not unique or unusual. The BLM has experience implementing similar actions in similar areas and have found effects to be reasonably predictable. The environmental effects to the human environment are fully analyzed in the EA, chapter 3. There are no predicted effects on the human environment which are considered to be highly uncertain or involve unique or unknown risks.

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** The selected alternative does not set a precedent for future actions that may have significant effects nor does it represent a decision in principle about future consideration. The selected alternative improves fish habitat in the Upper Nestucca Watershed in reaches identified in the EA chapter 2 and Appendix 1 on land managed by the BLM. Any future projects will be evaluated through the NEPA (National Environmental Policy Act) process and will stand on their own as to environmental effects.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.** The interdisciplinary team evaluated the selected alternative in context of past, present and reasonably foreseeable actions. Significant cumulative effects are not predicted. A complete disclosure of the effects of the selected alternative is contained in the EA chapter 3.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** The selected alternative will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will the selected alternative cause loss or destruction of significant scientific, cultural, or historical resources (EA, Appendix 2).

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** Based upon the generation of noise above the ambient level within 0.25 mile of unsurveyed suitable habitat, the selected alternative "May Affect-Not Likely to Adversely Affect" the spotted owl (EA, Chapter 3 pg. 50) and the selected action "May

CONTACT PERSON

For additional information concerning this decision or the BLM protest and appeal process, contact Katrina Symons or Matt Walker, Tillamook Field Office, P.O. Box 404, 4610 Third Street, Tillamook, Oregon 97141; telephone (503) 815-1100.

Approved by: Dana R. Shuford, Field Manager — Date: Jan. 12, 2001

Affect" spotted owl designated critical habitat. The Tillamook Field Office wildlife biologist determined the selected alternative would have *"No Effect"* on marbled murrelet designated critical habitat, however due to the generation of noise above the ambient level within 0.25 mile of unsurveyed suitable habitat is considered a "May Affect-Likely to Adversely Affect" action on the marbled murrelet.*(Note: During the ESA consultation process the interagency wildlife Level 1 Team disagreed with this conclusion, rather finding this alterative "May Affect" marbled murrelet critical habitat. See Intensity Criteria #1 for further details).* The selected alternative is considered "May Affect-Not Likely to Adversely Affect"on bald eagles due to the expected beneficial effect of improved fish stocks resulting in greater foraging opportunities.(EA, Chapter 3 pg. 43). Additionally, the selected alternative "May Affect - Likely to Adversely Affect", Oregon Coast coho salmon and its designated critical habitat, but any adverse affects would be short-term and would have beneficial effects in the long-term (EA Chapter 3 pp. 28-29, Appendix 4). Within the Willamina Creek Watershed, the selected alternative "May Affect - Not Likely to Adversely Affect", Upper Willamette Steelhead and its designated critical habitat, and adverse effects are considered negligible. As such, no loss of population viability or trend toward federal listing for any fish species in this watershed will result (EA, Chapter 3 pg. 29). The selected alternative was consulted on for the fisheries resource under the National Marine Fisheries Service's programmatic Biological/Conference Opinion for the Oregon Coast Province, dated June 4, 1999, and for the Upper Willamette Province, dated July 28, 1999. The Incidental Take Statement (extension) for the stated Biological Opinions was signed June 5, 2000 and is valid through September 30, 2001.

10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** The selected alternative does not violate any known Federal, State, or local law or requirement imposed for the protection of the environment. The EA and supporting Project Record contain discussions pertaining to such laws as the Endangered Species Act, National Historic Preservation Act, Clean Water Act, Clean Air Act, State Scenic Waterway Act and

Coastal Zone Management Act. State, local, and tribal interests were given the opportunity to participate in the environmental analysis process. Furthermore, the selected alternative is consistent with applicable land management plans, policies, and programs (EA, Chapter 3.7, Appendix 2).

PROTEST PROVISIONS

This decision is subject to protest by the public. To protest this decision, a person must submit a written protest to Dana Shuford, Tillamook Field Manager, 4610 Third Street, P.O. Box 404, Tillamook, Oregon 97141-0161 by the close of business (4:00 P.M. Pacific Standard Time) on February 1, 2001. The protest should clearly and concisely state the reasons why the decision is believed to be in error.

IMPLEMENTATION DATE

If no protest is received by the close of business (4:00 P.M. Pacific Standard Time) on February 1, 2001, this decision will become final but will not be implemented until a Biological Opinion is received from the United States Fish and Wildlife Service. Additionally, portions of this project will not be implemented until the required permits and required surveys for survey and manage species are completed. If a timely protest is received, this decision will be reconsidered in light of the statements of reasons for the protest and other pertinent information available and a final decision will be issued which will be implemented in accordance with 43 CFR Part 4.

Appendix 7

PUBLIC COMMENTS TO ENVIRONMENTAL ASSESSMENT
AND
BUREAU OF LAND MANAGEMENT RESPONSE

Upper Nestucca Restoration and Enhancement Project
Environmental Assessment Number OR-086-00-02

On June 9, 2000, a pre-decision letter along with a copy of the EA (Environmental Assessment Number OR-086-00-02) and draft FONSI (Finding of No Significant Impact) was mailed to six interested individuals, groups and agencies (Project Record, Documents 14, 15). Additionally, a notice for public comment appeared in the Headlight Herald on June 14, 2000 (Project Record Document 23). The end of the 30 day public comment period was 4:00 P.M., July 14, 2000.

As a result of the notice for public comment, four letters were received (Project Record, Documents 19, 20, 21, 22). All public input was assigned a number and filed in the Project Record. The interdisciplinary team assessed each comment received in response to the EA and draft FONSI. The Bureau of Land Management (BLM) responses to these comments are discussed and listed below. All comments presented in this document are direct quotations from comments received.

Project Record Document # 21, Les Helgeson

1. BLM must specify exactly what type of culvert structure will be placed at Ginger Creek. "Assuming" that a particular structure will be used is insufficient to meet the requirements of the National Environmental Policy Act (NEPA).

BLM Response: In order to comply with NEPA, the proposed action must be defined in sufficient detail to analyze impacts. BLM resource specialists (i.e. hydrologists, engineers, fisheries biologists) determined that the environmental impacts would be similar whether the current culvert is replaced with another closed-bottom culvert, an open-bottom pipe arch or a bridge. Specifically the anticipated impacts at this site include the mobilization of stored sediment (gravels stored upstream of the culvert) through whatever type of structure placed, the addition of passage for juvenile and adult fish at all flows, the same extent of disturbance area as there is currently an undersized culvert at this location that precludes fish passage at some flows, and small amount of new soil compaction or displacement (EA#OR-086-00-02 p. 37). As such, the BLM believes that the project description contained in EA OR-086-00-02 for this site is sufficient to meet the procedural requirements of NEPA. The type of structure to be placed at this site is dependant upon the final engineering design that will provide for fish passage and accommodate a 100 year flood event while taking into account engineering needs (road load,

substrate, cost).

2. ...the EA contains no analysis whatsoever of the substantial input of large woody debris that has been contributed to the stream channel as a result of recent storm events. Climatological data indicates that we have entered a long-term trend of similar weather events yet the EA makes no attempt to quantify the expected input of woody debris from additional storms.

BLM Response: The input of large wood as a result of recent storm events was both considered and expected. The time frame often quoted for recovery of Aquatic Conservation Strategy (ACS) objectives is 100 years which is approximately 25 generations of fish. Current levels of LWD are significantly less than that recommended by National Marine Fisheries Service (NMFS) and may even decrease before it begins to increase naturally. The cyclic nature of fish stocks and their dependance on the habitat features that wood creates may preclude or forestall salmonid recovery as the link between large wood, habitat complexity and fish use of the habitats wood creates is well established in Western Oregon. The selected alternative is to add large wood into strategic points in this watershed where it is shown to be lacking (approximately 21 large pieces per mile or more than four times the current level of 5 pieces per mile). Inputs from both outside sources and natural recruitment, both large wood pieces and smaller pieces, will bring portions of the Nestucca River closer to the recommended levels (80 pieces per mile) established by NMFS and the desirable levels (48 key pieces per mile) established by Oregon Department of Fish and Wildlife (ODFW). [*Note: The Nestucca River is likely outside of its range of natural variability due to many factors, the most notable of which in this analysis area include a major dam failure, stream cleaning (millions of board feet of logs were removed), road building and the removal of many riparian stands first by repeated fires and second by harvest precluding large scale additions of large wood to the stream for decades to come.]*

The standard for LWD in Western Oregon streams agreed to by both NMFS and BLM is 80 pieces per mile (this includes only the large pieces approximately 24 inches in diameter and at least 50 feet long). Currently the average number of pieces per mile is five (5) which is 7% of what would be expected (consider having to go through the winter with 7% of your house completed). Because LWD is a primary habitat component and it is so limited, the addition of LWD from storm events is a welcome addition however it does not come close to meeting the habitat component needs in the Upper Nestucca River. A point to consider is that in a dynamic system large wood is constantly being broken down, scour from water and natural sediment load scrape the outside while at the same time chemical and biological processes are rotting or eating it. Surveys of the Upper Nestucca in 1984 (BLM data) show large wood occurring at 0.5 pieces per mile of stream, 26 % of the area in pools and 44% desirable substrate (large gravel, rubble and cobble). Since that time multiple restoration projects within the Upper Nestucca and tributary streams have been implemented increasing both the amount of LWD and habitat complexity as measured by amount of pools and substrate composition. Surveys in 1997, after the major flood event of February 1996, show 45 % of the area in pools and 59 % of the substrate being of desirable size.

Additionally total wood volume increased from 12,761 cubic feet (1984 data) to 2459M^3 or 86,880 cubic feet (1997 data) and from 421 pieces (1984 data) to 2978 pieces of wood (1997 data). We believe from data analysis that a major portion of the 700% increase in wood volume is a result of restoration activities as direct input and/or as a secondary benefit of structures designed to catch and maintain the wood that enters the river. It should be noted however the increases from 1984 to 1997 are well below ODFW's "desirable levels" and do not even reach 10% of NMFS recommendations for LWD.

The amount of LWD contributions from riparian stands is expected to continue to be limited for the near future for multiple reasons. Fire history in the Upper Nestucca removed much of the older forest trees and down logs due to multiple fire events and subsequent salvage of the remaining trees/snags. Many of the natural stands that have grown back in this area that are now 80-120 years old and would have started contributing to LWD by this time, but were thinned, removing trees that would have likely died of suppression and added LWD to the forest. The result of these events is a forest that is generally healthy and not expected to begin adding large amounts of LWD for another 30-50 years (Late-Successional Reserve Assessment pp.75-76). Additionally timber stands which were harvested and burned will require the same 80+ years to mature to the stage that they may contribute large quantities of LWD.

In summary the lack of large wood within this stream system is quantified and the benefits of large wood in creating and maintaining quality habitat have been demonstrated. Additions of large wood from stream side stands are not expected in major quantities for some time. The placement of LWD and its maintenance, as proposed will provide needed habitat components, albeit still less than recommended levels but better than not having anything until natural processes come into effect in the future (30 to 50 years in the unharvested stands).

3. The EA must quantify the rate of failure, provide a verifiable cost/benefit analysis and provide evidence that additional structures will not fail at a similar rate resulting in a never-ending cycle of structure repair projects and potential habitat degradation.

BLM Response: The BLM has no procedural requirement to conduct a "verifiable cost/benefit analysis", nor is there any compelling reason to conduct such an analysis as it would not provide meaningful information on which to base a decision due to the high degree of subjectivity. The BLM acknowledges your concern for structure failure and resultant costs/benefits and offer the following information for your consideration.

The success or failure of instream work is interpreted in different ways if the pieces of large wood are still in the system, they may still be functional elements in the riparian system. While some shifting of logs and other material is expected during flood events their presence in the stream and eventual transport to the ocean is expected. Specific structures that are still in place but may not be functioning as they were intended would be the targets for "repair". These repairs as described in the EA, include improving fish passage; adding hiding cover by adding debris catching elements; or reconfiguration that allows them to collect and maintain spawning gravels

and smaller pieces of wood moving in the stream system that would likely be lost through downstream transport. The question of potential habitat degradation is problematic to answer as there may be better ways to accomplish some goals but to do nothing maintains a system that has been set up by past management practices and natural events to continue to degrade. Habitat within the Upper Nestucca is expected to degrade (maintain its degraded condition) by active transport and wear and tear for the next 30-50 years before major improvements can be expected through natural systems. This project would increase the amount of large wood directly by placement and indirectly by providing points for the natural wood moving in the river system to be held in place for longer periods of time. Additional benefits include the collection/maintenance of spawning gravels, formation of pools, increased nutrient retention and due to these changes an increase in the numbers of salmonids rearing through the winter in these habitats.

Cost to benefit analysis has been approached in many ways and can be very questionable based on what figures are used and what benefits are identified. Past projects similar to what is proposed have cost about $250,000 and include initial placement of LWD, large boulders, building of side channels, alcoves and the "maintenance" of these structures. The projects proposed in this EA will likely cost $200,000 and may require some further maintenance at year 5-10 and very likely by year 20 amounting to another $40,000 to $80,000 once during those years. Most benefits as shown by improving habitat components are difficult to place a price on. The non-monetary benefits that these types of projects provide include nutrient cycling, protection and improvement of overwintering habitat for coho, steelhead, cutthroat trout and lamprey (Pacific/and river), teaching opportunities, aesthetic value and an increase in the number of smolts that rear through the winter and make their way to the ocean. Even a small increase in the percentage of presmolts that successfully overwinter is a success that can already be claimed by our past projects and should be fully expected in future projects as well. The monetary benefit that these kinds of projects can claim is increased recreation opportunities, sport and commercial harvest.

4. The EA must also include a detailed analysis of the effects of mainstem BLM enhancement projects on the spawning potential of Winter Steelhead and Fall Chinook Salmon.

BLM Response: The success of spawning fall chinook in restoration reaches is well documented as is the use of enhanced reaches by greater numbers of juvenile coho and steelhead As pointed out by ODFW the observation of winter steelhead is quite problematic due to their secretive nature and limited residence time in river systems before they return to the ocean. The effects of these projects in the mainstem Nestucca and tributary streams are noted to be successful in creating the kinds of habitat features that they seek out for spawning. As previously described in response to comment 2 the increase in spawning gravels in the mainstem of the Nestucca from 1984 to 1997 indicate that Fall chinook salmon have benefitted from the addition of large wood placed to accumulate gravels. Also winter steelhead are regularly observed in conjunction with the types of complex habitat structures that are in place and proposed for placement where they are absent or lacking.

Research by ODFW done on projects in the Nestucca and Alsea has shown a strong increase in the numbers of overwintering steelhead, coho and cutthroat in restored streams over control streams nearby (Effects of increasing winter rearing habitat on abundance of salmonids in two coastal Oregon streams M.F. Solazzi, T.E. Nickelson, S.L. Johnson, and J.D. Rodgers).

NMFS research in Western Oregon and Washington on stream restoration segments and control segments compared the abundance of coho, steelhead and cutthroat trout to habitat in both summer and winter. The results showed "Juvenile coho salmon densities were 1.8 and 3.2 times higher in treated reaches compared to reference (untreated) reaches during summer and winter respectively". Additionally densities of 1+ cutthroat and steelhead were essentially the same in treatment and control reaches in summer but were 1.7 times higher in restoration segments in winter (Density and size of juvenile salmonids in response to placement of large woody debris in western Oregon and Washington streams, Philip Roni and Thomas P. Quinn in preparation for release, personal communication October 31, 2000).

Analysis of effects of this proposed project were analyzed for all salmonids listed on Table 4 including chinook and steelhead (page 24 of EA OR 086-00-02) and discussed on page 27-29. Specifically on page 29 the EA states "Potential adverse impacts would not result in a trend toward federal listing, nor would they lead to any loss in population viability of any fish species. Beneficial impacts would be expected to result in increased population viability of fish species, particularly Oregon Coast coho salmon and other salmonids within the upper Nestucca River watershed."

5. BLM must therefore implement a monitoring program to determine the abundance and location of spawning steelhead prior to implementing any new habitat modifications. Thus far, the majority of failed structures have been placed in the mainstem Nestucca River, potentially disrupting the spawning potential of ESA candidate steelhead and fall Chinook salmon, which primarily spawn and rear in the main river.

BLM Response: A monitoring program is currently in place to document the numbers and trends of juvenile salmonids and adults.

The success or "failure" of a structure does not alter the potential for steelhead spawning but may have an impact on the rearing potential if the complex habitat created by the structure is then missing. While steelhead use the main channel for spawning and rearing many steelhead use side tributaries as high as can be accessed (varies by water levels and barriers). Because steelhead are the most aerobic of the anadromous salmonids they can be expected to move high into the main channel and side tributaries selecting spawning habitat that is often not the "best" but very often without competition from other salmonids due to timing and their ability. The years after spawning that their offspring spend in the stream channel (generally 2-4 years exposes them to more winters than coho who only spend one year) are often the determining factors of success.

Fall chinook do not rear in the main river but move through to the lower river and estuary after

emergence from gravel substrate. As stated above the major factor that fall chinook depend on is the presence of quality gravels in stable configurations that are often created directly by the types of projects proposed for this portion of the Upper Nestucca River. The highest spawner counts that BLM has record of occurred last year in the Upper Nestucca for fall chinook, with the greatest numbers in past project sections placed in the late 1980s and maintained in 1995. Another example of fall chinook use was the lower mile of Bear Creek which at peak count had over 100 fall chinook spawning in 1999. This stream prior to 1994 had a very simplified channel with a large proportion of bedrock. With the addition of large wood in 1994 the stream character changed substantially, gravels aggraded, pools formed and refuge habitat increased resulting in the increased use of Bear Creek by not only Fall chinook but also coho, steelhead and cutthroat trout. Bear creek was also selected as a study site by NMFS for research and the results are described in the BLM response to comment 4.

6. ..the effectiveness of wood structure placement in the larger sections of the mainstem such as proposed in projects #5 and #6 is undocumented. An example of a successful alternative project is the strategic placement of boulders approximately 15 years ago at the USFS Rocky Bend Campground. Both Steelhead and Chinook use this area extensively for spawning and rearing despite the apparent lack of large woody debris.

BLM Response: Project #5 does propose the use of boulders as well as large wood, as we recognize that using boulders can be beneficial. Large wood provides a long term nutrient source, generally provides overhead cover and has a much greater surface area. Another consideration is the spawning locations are often different from rearing locations (juvenile salmonids will move upstream and downstream throughout their rearing period taking advantage of the best habitats). The use of large wood on rivers much larger than the Nestucca at Alder Glen campground is well documented. These uses of wood include log jams in the Cowlitz River, deflectors in California made of giant redwoods, piers, groins, and major dams have all been constructed of wood. Additionally as was described on the two different tours, structures placed in the Alder Glen section would be side oriented and not channel spanning. The reference to project #6 is documented in that it is in the areas that have been worked on before and is associated with more complex fish habitat features. An example of this type of activity would be the repair of a weir that has twisted on site or has under-scoured by placing the structure in its original configuration or the addition of new large wood or boulders to create a better functioning structure to retain or improve habitat conditions.

The placement of large boulder clusters can be very effective in producing areas of graded substrate. For boulders to be effective, they must be large enough to withstand many years of high flows. This requires very large equipment to operate directly in the river.

The Rocky Bend area, where the boulders have been effective, is a very low gradient section which was used heavily by steelhead and chinook prior to the project. In this type of area we

would try to avoid the disturbance associated with equipment placement which was a common practice 15 years ago (each boulder must be walked into place which requires many more trips from rock drop point to placement point in river than a similar sized structure made of a log or logs and rocks used for support or ballast).

7. It is hoped that BLM will work closely with the newly formed Nestucca Fisheries Working Group to resolve the issues described above.

BLM Response: Recovery of fisheries stocks is multi-faceted however the BLM manages the Habitat only . The balance of everything else from fishing quotas, ocean conditions, human or natural events that affect fish are outside our authority. As stated above, it is the BLM's intent to provide the best spawning and rearing habitat to these native salmonids as possible and we will continue to use monitoring and research, as appropriate, to further our knowledge and refine our management actions.

8. It is possible that enhancements may be desirable but more population data and observation is needed before additional wood structures are added to the mainstem Nestucca River.

BLM Response: Additional population data beyond the spawning surveys and summer snorkeling counts the BLM is already doing is a desirable albeit costly undertaking (specifically smolt traps). However, the research is quite clear that large wood in coast range streams provides the building blocks that improves habitat conditions which the fish respond to, as evidenced by NMFS work in Oregon and Washington coastal streams and the ODFW smolt trap studies conducted in the Nestucca and other streams in the early 90's and reams of other research on the effects of large wood on stream habitat. Although it is an excellent idea to further observe conditions and populations, it is not essential prior to project implementation, as the notable LWD deficiency in the Nestucca River and the demonstrated need for large wood to create and maintain quality fish habitat is well supported in literature and is discussed in depth in the EA.

9. BLM needs to develop an alternative that is responsive to the issues described above. Individual projects should be prioritized within this alternative and individual projects need to be evaluated for long term stability and cost effectiveness, particularly those projects proposed for the larger mainstem Nestucca River.

BLM Response: Similar comments received early in the planning process led to the development of two alternatives which were analyzed in this EA. We feel that your comments have been adequately addressed above, as well as in the EA. The development of another alternative is not necessary as it would not address any issue that has not already been addressed in the EA, nor would the effects of such alternatives be notably different than those already disclosed for the range of alternatives contained in the EA.

Project Record Document #22
Oregon Department of Fish and Wildlife (ODFW)

Comment 1: ODFW concurs with the Bureau of Land Management's proposal to implement Alternative 2 as identified in the draft Decision of Record and Finding of No Significant Impact. We firmly believe the proposed actions will have little effect on wildlife species in the area, and concur with your decision that this is an appropriate action for enhancing at-risk fish populations and their habitat in the Nestucca Basin. ODFW believes that any negative effects associated with instream work (i.e. culvert replacement, placement of large wood and rocks, etc.) will be short-term in nature and are greatly outweighed by the long-term benefits to aquatic and riparian habitat.

BLM Response: No BLM response necessary as ODFW concurs with the predicted effects to fish and their habitat (beneficial and adverse) described in the EA.

Comment 2: With regard to project #1 (Ginger Creek culvert), BLM has not identified a final stream crossing design, but indicates that a bridge may be a possible alternative (EA, Page 16, Item 5.). ODFW generally recommends use of bridges over culverts wherever possible, and we encourage you to pursue a bridge design at Ginger Creek if is determined to be a cost effective alternative.

BLM Response: BLM's primary goal at the Ginger Creek location is to provide passage to all fish at all flows possible while providing passage of up to a 100 year event with associated bedload. As discussed in the EA there are several options that may be pursued at this location to achieve the stated goal. While costs are always a consideration, the need at this location is demonstrated both as a fish passage consideration and due to its history of plugging a bed load passage problem. As such, an open bottom arch or bridge were recommended by our hydrologist as well. Also as you stated in your comment #3 further review by ODFW and other state and federal agencies will be required, and the BLM should be in a better position to describe the Ginger Creek site from a engineering needs standpoint when funding becomes available.

Comment 3: ODFW will provide further comment on proposed fill and removal activities as we review the local, state, and federal waterway permit applications.

BLM Response: We look forward to your comments to these permitting documents as they are reviewed and finalized.

Project Record Document #19
Department of Land Conservation and Development (DLCD)

Comment 1: The Tillamook County planning department should be contacted to ensure the proposed project would be consistent with their comprehensive plan and zoning ordinances.

BLM Response: During the permitting process, the Tillamook County planning department will be contacted as you suggest.

Comment 2: The proposed project will need to comply with the Oregon Removal - Fill Law. It appears that the proposed activities may require Removal - Fill permits. BLM should contact the Oregon Division of State Lands (DSL) regarding the need to submit a permit application(s).

BLM Response: This project will require a permit to be implemented. We will be applying for that permit as well as others. Division of State Lands was contacted during the scoping phase of this project and will be receiving a permit application for the proposed project.

Comment 3: We recommend that BLM continue to coordinate project plans with the Oregon Department of Fish and Wildlife (ODFW) as well as federal fish and wildlife agencies. Appropriate best management practices should be implemented to avoid and minimize impacts to fish and wildlife resources.

BLM Response: Project coordination with county, state and federal agencies is an ongoing process which we will continue. Implementation of best management practices to minimize impacts is an integral part of this project.

Comment 4: <u>At this time, DLCD has no specific objections to the EA or proposed project. BLM will need to apply for any required local, state and federal permits. Receipt of those permits should ultimately demonstrate consistency with the Oregon Coastal Management Program.</u>

BLM Response: We believe that the proposed project is consistent with the Oregon Coast Management Program and will work with DLCD and other entities to acquire all the necessary permits.

Project Record Document #20
United States Fish and Wildlife Service (USFWS)

1. A more detailed map that clearly identifies the main drainage basin (Nestucca River) and the individual tributaries where activities are proposed to occur would help orient the reader. In addition, identification of the locations of the culvert on Ginger Creek proposed for replacement and the *specific* locations of proposed individual restoration and enhancement sites would be helpful in evaluating the proposed action. The location, patch size, and current condition of proposed source areas for large wood (blowdown patches and areas along the Nestucca River and its tributaries) should also be identified for reference and evaluation

BLM Response: A map was provided to the Level 1 team with the blowdown patch locations and their location relative to the Upper Nestucca project area. The location of the Ginger Creek culvert replacement is on the map originally sent out with the EA. Also as identified on the original map provided, gray shaded areas are conifer stands greater than 40 years of age that could provide onsite conifers for the projects. This information along with the tree selection criteria that we have discussed both on the field tour and our BA (draft accepted by Level 1 Team) should provide your agency sufficient information from which impacts can be assessed. A more detailed map of the proposed project areas is attached following these responses. The United States Geological Survey (USGS) Quad maps for this area are Dovre and Trask MTN.

2. Several times throughout the EA, reference is made to "Appendix 4 Matrix of Pathways and Indicators". However, the title of Appendix 4 is "Environmental Baseline on Relevant Indicators for the Oregon Coast Range Province and Willamina Creek". If identifying the correct information in Appendix 4, the text reference should correspond with the title of Appendix 4.

BLM Response: From a point of clarity within this document we should have had the same title referenced throughout the document, however the "Environmental Baseline on Relevant Indicators for the Oregon Coast Range Provence and Willamina Creek" is another name for the Matrix of Pathways and Indicators.

3. ...it is difficult to evaluate the proposed projects because the EA does not appear to contain sufficient information on specific aspects of project design to determine if the proposed actions have the potential to achieve the desired results. There is only limited discussion of log placement, boulder placement, log and boulder placement, and bank stabilization upon which to determine if the intent of the action will be achieved. ... Because there is a lack of specific information on the stream morphology and project design for rock and large wood placement in the EA, we are concerned about the potential effects of the proposed projects on hydrological, geomorphological, and ecological processes in this watershed.

BLM Response: BLM disagrees that the EA does not contain sufficient information to estimate

the potential effects of the proposed projects on hydrological, geomorphological, and ecological processes in this watershed. As described in the EA, the past history of the Upper Nestucca includes major human influenced floods, stream cleaning and impingement of the Nestucca River by the Nestucca Access Road. Part of the desired results for this project are to increase the amount of large wood within the stream channel and floodplain, which obviously would be achieved by placing large wood. The proposed new sites for instream wood and/or boulder placement were selected based mainly on gradient - only low gradient reaches that are not highly confined which mimics the types of locations these structures would naturally accumulate as described in the Nestucca Watershed Analysis (BLM, USFS 1994) and in the Nestucca/Neskowin Watershed Assessment (1998). It is our intention to modify hydrological processes as well as geomorphological conditions to benefit the ecological processes that have been altered by past actions as described in the EA (Chapter 3, Past, Present and Reasonably Foreseeable Future Actions (Appendix 3) and NMFS Matrix (Appendix 4).

Specific project design features will be included within the permit applications to Division of State Lands (DSL) and United States Army Corps of Engineers (USACE). This permit process requires review by multiple agencies including Oregon Department of Fish and Wildlife (ODFW), County Planner and others. Examples of the structure types to be placed in these identified reaches have been described both on site tours and in reference documents. The detailed descriptions of watershed conditions at the 5th and 6th field level is contained in NMFS Matrix of Pathways and Indicators (Appendix 4). Reference to both the Nestucca/Neskowin Watershed Assessment (1998) and the Nestucca Watershed Analysis (BLM ,USFS 1994) provide some of the detailed data on the amount of low gradient, generally unconfined stream segments, often referred to as "productive flats" and make recommendations as to their priority.

Please reference the attached table which summarizes many of the details found in the EA, supporting project record, and discussed with representatives of your agency on several occasions.

4. We recommend that information be provided which indicates that stream hydraulics, hydrology and geomorphology have been carefully evaluated before any in stream work is implemented. For restoration efforts to be successful, it is essential that basic information is gathered and understood before introducing in stream structures. The most relevant and essential properties of stream morphology to be well understood are: bankfull width, bankfull depth, dominant bed sediment size, and channel gradient.

BLM Response: As stated above in answer to comment 3, we have considered stream channel morphology to determine where and how to place logs and boulders. Channel gradient was an important consideration and we limited the proposed project reaches to those with low gradient, less than 4%. Bankfull or active channel width and depths, and dominant substrate size were also considered. Areas that are bedrock dominated (due to past management influences rather than natural geomorphological processes) are considered high priority for wood placement,

because large wood will help retain smaller substrate to provide spawning areas and create scour pools. We conducted a site-specific analysis of the reaches to determine the most appropriate areas for wood and boulder placement. This analysis provided the basis for the development of the proposed action contained in the EA.

Please see the attached table 1 cited above in BLM response to comment 3, for more details.

5. In fact, the felling of large trees within the riparian area which provide necessary cover to maintain appropriate water temperatures appears inconsistent with the overall objective of improving the system for aquatic resources. We recommend that trees within one site potential tree height of the stream not be felled because the riparian canopy and structure, erosion and sediment problems, and elevated water temperatures are limiting factors in the project area.

BLM Response: This project will be implemented in a manner that promotes long term ecological integrity of the ecosystem and maintains ACS objectives (see Appendix 5). The trees to be felled onsite will be carefully selected so they do not reduce shading of the stream channels. The number of trees proposed to fell onsite is inconsequential relative to the number of trees remaining and should have no adverse effect on water temperatures as stated in the EA. Felling trees that are closer to the stream than one site potential tree height would help reduce impacts to terrestrial species by creating less ground disturbance (trees further away would need to be moved by ground-based equipment) and have less chance of disturbing the canopy of the adjacent trees. Additionally the fact is that there appears to be no "problems" with the riparian canopy or structure where tree selection would occur given that detailed tree selection criteria have been developed. Water temperatures are always a consideration, however in the uppermost two project reaches stream temperatures are below the 303d listing level the last two years (BLM unpublished data) and currently temperature is not a listed (303d) problem above Powder Creek and all the proposed project reaches are above this stream junction with the Nestucca River. Sediment and erosion potential was analyzed in the EA, pages 36-44.

In summary, stream segments within this analysis area have canopy closure (shading) that varies from 75% to 94% of 180 degrees of potential open sky. With the implementation of this project shading would not decrease at the reach level of measurement and at single points along the river the potential decrease in shading would be in a range from 0 to 2%. It should be noted that most of the direct shade on the Nestucca River is provided by Red Alder which will not be removed. Erosion problems are not probable in the portions of the Nestucca River to be worked on as previously described. A large percentage of the banks where work would occur are considered stable and consist of bedrock (Marine Basalt) or are vegetation or boulder/cobble dominated. Temperatures in the Upper Nestucca are not currently considered water quality limited by the State of Oregon above Powder Creek and because no measurable change in average shading is expected, changes in temperature are not expected either.

6. ...if the wood used for the proposed actions comes from standing trees that serve a current function for wildlife and riparian corridors, the trade-off of resources should be carefully evaluated. Adverse impacts to terrestrial wildlife and riparian functions should be avoided in the attainment of large wood for use in stream.

BLM Response: Trees intended for use in the stream channel would be selected in such a way to minimize any impacts to terrestrial wildlife (Chapter 3 of the EA). In general the selected trees would be trees with little defect, small crowns and little structural characteristics that may make them desirable to wildlife. Moreover the proposed action is consistent with the ACS objectives (Appendix 5). Due to the small amount of area that will be disturbed (access trails and pulling trees) limited impacts would be expected to other species. Most of the activity during a project occurs in the riparian zone in the active but unwetted channel which is an area that is largely devoid of plant or animal life in the summertime.

7. ...the potential effects of proposed modifications to McGuire Dam and Reservoir on the effectiveness of your proposed in stream enhancements under lower flows and/or changes in flow management in the watershed are not discussed. Once implemented, the hydrology of the area will be highly altered and flow is critical to the ability of the river to trap and sort gravels.

BLM Response: As discussed above, the hydrology of the Upper Nestucca including flow is already altered at the present time due to the operation of the McGuire Dam by the City of McMinnville. The statement that hydrology will be highly altered as it relates to the Nestucca River and its ability to trap and sort gravels is exaggerated. The current reservoir as well as the proposed expansion at the current dam site make up a catchment basin that is 1% of the Nestucca Rivers drainage area. Changes in flow and sediment routing (all sizes) are expected to have effects that are both beneficial and adverse and are discussed in detail in their EA for that project and were analyzed in chapter 3 and referenced in Appendix 3 Past, Present and Reasonably Foreseeable Future Actions portion of this EA.

Changes in the flows downstream of the expanded reservoir are not expected to affect the design, need or type of structures placed in the Upper Nestucca River. The current routing processes downstream of McGuire Dam are already controlled by its operations. The expanded reservoir will maintain that situation throughout the year rather than having drawdown and refilling periods.

8. The "Purpose of and Need for Action" section (page 6 of EA) should identify the need to restore adult and juvenile fish passage at the Ginger Creek culvert, and the goal of improving salmonid passage should be identified in the proposed action.

BLM Response: The Purpose and Need does not mention the Ginger Creek culvert specifically, however both in the text on page 8 and the Table on page 10 the need for fish access to available

habitat is cited as being currently lacking and in need of being addressed. The second part of the question regarding improving fish passage is discussed in detail on page 15 of the EA under the title Project Descriptions, which goes into the what, where and why, this project at this time.

9. Proposed Action (page 12): The second paragraph indicates a culvert would be replaced or modified. On page 16, the Project Description of the Proposed Action states that the existing culvert will be replaced by an open-bottom arch pipe or a bridge. Either replacement structure would be a good choice in terms of fish passage. However, we do not recommend modifying the existing culvert.

BLM Response: This specific culvert is discussed in detail in both the project description on page 15 of the EA and in the water and soils portion of chapter 3 of the EA. Replacement refers to a different type of structure at this location and modification would in this instance require a larger culvert to be installed. The project description does not specify the type of structure, but a bridge or open bottom arch pipe appear to be good choices at this time. Whatever type of structure placed at this location will be designed to both pass all life stages of fish and the water and bedload for this stream. There will be no modification of the exiting culvert as it is to small and steep to pass fish at all flows.

10. Project Descriptions, Project #1 (page 16): Detailed planning and design of the culvert should be coordinated with the Oregon Department of Fish and Wildlife and the National Marine Fisheries Service; this coordination is important to assure the best available criteria is used to determine proper culvert design and placement for adequate fish passage.

BLM Response: As previously stated the structure installed at this location will be designed to pass fish at all life stages and will be designed for a 100 year event rather than the 50 year ODFW design standard. As with all projects of this nature, technical review of BLM's proposal by ODFW, USACE, DSL and NMFS is expected in order to obtain proper permits prior to implementation.

11. Alternative 1, No Action (page 25): The second paragraph states that under the No Action Alternative "No direct or indirect effects would occur to fish or fish habitat in either the Nestucca or the Willamina drainage". If the Ginger Creek culvert is not providing adequate fish passage, fish production would be affected; therefore continued adverse impacts and production losses would result from "no action".

BLM Response: As described within Chapter 3 and Appendix 4 of this EA there are multiple effects that may occur as a result of the No Action alternative, however they are not part of a planned action and would be expected to occur through time. Additionally there are other categories that are expected to degrade through time which will impact fish habitat and thereby fish with the no action alterative (Appendix 4). Alternative 3 also does not provide for the replacement of this culvert at Ginger Creek and the ongoing impacts of limited fish passage and

production losses will remain if this alternative was selected (EA Chapter 3 and Appendix 4).

12. Appendix 4, Physical Barriers (page 81): This section indicates that juvenile fish passage is blocked at the Ginger Creek culvert and page 5 of the main report states that the culvert is plugged two or three times per year. Since a plugged culvert would block adult passage, the sentence should be modified to say "juvenile **and adult** fish passage is known to be blocked at the Ginger Creek culvert at some flows".

BLM Response: This change will be made in an errata to the EA. It must be noted that this culvert is checked often and is routinely cleared of debris that cover its intake. Adult passage is not always precluded at this culvert but it is a certainty that not all fish species or life stages can pass this culvert at this time and especially if any obstruction is present in the culvert.

13. ...we have appreciated the willingness of the BLM to incorporate minimization measures into the tree selection criteria. However, these mutually developed minimization measures are not reflected in this EA. It is our understanding that these additional criteria will be incorporated into the Biological Assessment to fulfill Endangered Species Act consultation requirements, and therefore will be included in the documentation supporting the final decision on this proposed action.

BLM Response: Your understanding is correct.

14. ...more information regarding the criteria for selecting source trees and the specific locations of in stream activities is required to fully understand the potential effects to wildlife. "Various patches" of unspecified size located along 7-9.5 miles of river corridor does not provide sufficient information regarding the quality or quantity of terrestrial habitat conditions which will be impacted. It is presumed that the Biological Assessment will provide the appropriate level of detail required to accurately evaluate impacts to wildlife.

BLM Response: The Biological Assessment (BA) has provided as much information as the interagency Level 1 team felt was necessary to evaluate the impacts for the purpose of Endangered Species Act (ESA) consultation. For the purpose of NEPA, the appropriate level of detail is provided in the EA of the predicted environmental effects of the alternatives. In fact, the Level 1 team in July, 2000 concurred with the findings within the EA with the exception of the "No Effect" call for marbled murrelet (MAMU) critical habitat. See BLM response to #20 for additional explanation. The intention of the tree selection criteria is to mimic small scale natural disturbances where one or a few trees would fall into or along the river in several places along 7-9.5 miles. The additional caveat that the trees that are chosen to "fall" into the river not have any special features that would make them desirable to murrelets or many other wildlife species, makes it difficult to know exactly where all of those trees are at this stage of planning

and analysis. Our knowledge of the Nestucca River corridor helps us feel confident that we would be able to select an adequate number of trees to meet the immediate needs of the fisheries project while keeping impacts to terrestrial wildlife to a minimum. We feel that it should suffice to say that regardless of where exactly the trees are that would be selected, the selection criteria will minimize any impacts that may occur to terrestrial wildlife. If the impacts cannot be minimized in a given area, trees would not be selected from that area.

15. In addition to the monitoring of the aquatic system described, we also recommend monitoring of the uplands from which the source logs were acquired;...Monitoring of these locations would provide additional information regarding impacts to the character of these areas post-treatment.

BLM Response: We feel that the impacts to the upland areas where source logs would be acquired is well within the range of natural variability for riparian stands. We would only take trees from fully stocked stands and those stands will remain fully stocked at the completion of the project. We do not have the funding or the personnel to monitor every project and in the case of this project, where we feel that there will be little or no adverse impact to the terrestrial environment, monitoring would be of such a low priority as to not likely be funded.

16. Prior to implementation of any aspect of the proposed action, we urge the BLM to develop a comprehensive monitoring plan that includes a tracking system to ensure completion within the desired time frame and the allocation of necessary funding and staff.

BLM Response: Regarding terrestrial monitoring refer to BLM's response to comment 15. Monitoring of aquatic habitat components is an ongoing process with recommended time frames and quality control checks. Aquatic monitoring includes ODFW aquatic inventory surveys at approximately 10 year intervals (BLM funded the last set in 1997-98), yearly spawning surveys, snorkeling surveys and temperature monitoring.

17. Because the exact location and condition of the blowdown patches and the surrounding areas referred to in the EA are not described, it is unclear whether or not these areas meet the 'functions as one' intent of the TMC's clarification memorandum. If these areas are indeed considered connected to a previous opening, and therefore in compliance with salvage guidelines and the RMC's memorandum, the BLM should be sure to clearly describe the rationale behind this conclusion in the project file upon which the Deciding Official bases his decision.

BLM Response: Since this project is a habitat improvement project and not a salvage project, the guidelines for salvage in an Late Successional Reserve (LSR) would not apply. This position is supported in a Regional Ecosystem Office (REO) finding for a similar project which involved removal of blowdown timber from a 4 acre parcel in LSR for use in an instream habitat improvement project, Project Record document # 18. The REO found that it generally does not

review habitat improvement projects but it did so due to concern that the project may be inconsistent with Standards and Guidelines (S&Gs). REO specified that salvage of down trees in patches of less than 10 acres is generally inconsistent with salvage S&Gs, however, they found the project to be consistent with habitat improvement projects in LSRs. REO considered the project a habitat improvement, rather than a salvage project requiring consistency with S&G C-17 (Habitat Improvement Projects). The BLM believes the habitat restoration project described in this EA is consistent with S & G C-17 and LSR objectives (Page 55 of EA).

Additionally, we have considered the impacts of this fisheries habitat improvement project on mid- to late-seral forests in our analysis and do feel that if the salvage guidelines did apply our actions would be within the scope and intent of the guidelines and the RMC's clarification memorandum. To specifically answer your concern, all of the blowdown patches where trees are proposed for removal are immediately adjacent to recent clearcut harvest units that are considerably larger than ten acres, and are a direct result of those harvest activities. The "ten acre minimum" guidelines for salvage in LSR's is meant to address the importance of small forest openings within late successional forests and as such, the RMC's memorandum clarified that blowdown patches smaller than ten acres that are connected to larger openings (i.e. clearcuts) are essentially functioning as a large forest opening, an opening considerably different than those addressed by the guidelines. In short, the blowdown patches where trees are proposed for removal are functioning as large early seral openings in a highly fragmented landscape. In addition, Course Woody Debris would be left in the blowdown patches to satisfy at least the moderate level for mid to late seral stands as identified in the Late Successional Reserve Assessment p. 96.

18. ...the RMC's memorandum notes that "the specific age or structural condition of the adjacent stand is an important consideration when evaluating the salvage proposal". Thus a description of how the Blowdown patches may or may not function with respect to any adjacent late-successional stands should also be included in the rationale.

BLM Response: As stated above, this fisheries restoration project is a "habitat improvement" project and not a "salvage proposal" and as such the standards and guidelines for salvage do not apply.

19. Course Woody Debris (page 45): In the discussion of the amount and condition of coarse woody debris (CWD) in the AMA, the EA states that the "proposed action would, in affect, redistribute CWD from a few areas where it is abundant to other areas with the LSR where it is deficient, and convert some of it from terrestrial habitat to aquatic habitat;. Although it is clear in the EA that downed wood from the blowdown patches is intended for use in stream restoration activities (that is, converting it form terrestrial to aquatic habitat), it is unclear how the proposed action will provide additional CWD in the terrestrial environment outside the immediate flood plain.

BLM Response: The objectives of the project do not include an enhancement of CWD in the terrestrial environment outside of Riparian Reserves. The point we intended to make was that much of the large wood placed to enhance instream habitat is going to be outside of the stream channel for much or all of the year, even under high flows. This wood will continue to provide terrestrial habitat within the LSR for a large range of species, even though it has been moved from one site to another.

20. Effects to the murrelet (page 48): The EA states that "no murrelet habitat would be modified" and that "the proposed action will not affect suitable habitat therefore will have No Effect on marbled murrelet designated critical habitat". Based on the following, we feel a "may affect" determination is more appropriate.

BLM Response: After reviewing the project in accordance with the Endangered Species Act, the interagency wildlife Level 1 Team concluded that a "May Affect" call upon designated critical habitat, for the marbled murrelet was appropriate. The Level 1 Team's finding was primarily a result of the potential for some minor positive and negative impacts to suitable habitat. Although the Level 1 Team finding's is based upon the same impacts considered by the Field Office Staff Biologists, the Field Office biologist considered these impacts to be of such a negligible, inconsequential nature that a "No Effect" call upon critical habitat was appropriate, especially when considering the incorporated design features and what is known of stand characteristics in the vicinity of known murrelet nest sites.

21. Terrestrial mollusks surveys would be required wherever ground disturbing activities will occur.

BLM Response: Mollusk surveys will be conducted to protocol wherever ground disturbing activities may affect survey and manage mollusk habitat.

22. Are there any known or suspected survey and manage bat roosts within or adjacent to any project areas?

BLM Response: Bats have been observed using the Alder Glen bridge as a night roost during foraging breaks, although not as a day roost; the project is not expected to impact the use of this night roost. Technically speaking, the bats identified within the Northwest Forest Plan are not Survey and Manage species and the standard and guideline that pertains to them are found within Matrix and Adaptive Management Area standards and guidelines, and those S&G's provide for additional protection of caves, mines, and abandoned wooden bridges and buildings; none of which occur within or near the proposed project areas.

23. Until completion of our consultation process and the required surveys for Survey and Manage species, we suggest that you defer finalizing your decisions to ensure that the decision records will not require an amendment in the future. The outcome of these two processes could result

in modification of the proposed action and may affect the Deciding Official's finding.

BLM Response: Since the draft BA has been reviewed by the interagency Level 1 Team and BLM has incorporated their suggestions, as appropriate, we do not anticipate Terms and Conditions in the Biological Opinion (BO) that would notably modify the proposed decision. Additionally, should Survey and Manage surveys result in the location of species requiring management, the project could be modified in such a manner (e.g. different placement technique, different access route, etc) as to not appreciably change the scope or intent of the project or require the issuance of a new environmental document.

TABLE 1 Selected physical and hydrological components of the Upper Nestucca River and two tributaries, Bear Creek and Elk Creek

Indicator	Nestucca R	Bear Creek	Elk Creek	Data source
Drainage area	30,513 Acres	3,584	6,445 Acres	Nestucca Watershed Analysis (WA)
Stream order	5^{th} - 6^{th}	4^{th}	5^{th}	WA or routing tool
Elevation range	~700 to ~3,100 feet	760 to 2,400 feet	~870 to ~ 2,840	ODFW* and USGS**
Slope	1.2% to 1.9%	2.5% - 3.7%	2.3%	ODFW
Discharge at bankfull	790 cfs	92 cfs	167cfs	cubic feet per second (cfs) -calculated
Rosgen type	B2 to B4	B3 to B6	B2 to B4	Professional Judgement
Valley type	Hillslope constrained Moderate V shaped	Hillslope constrained Moderate V shaped	Hillslope constrained Moderate V shaped	ODFW
Floodplain Connections % of year accessed	6% of year = to or greater than bankfull discharge.	6% of year = to or greater than bankfull discharge.	6% of year = to or greater than bankfull discharge.	At calculated cfs an average of 22.6 days would equal or exceed bankfull levels. Gauge Data
Flow Regime	Perennial flow. Flow variations due to rainfall. Major events are usually caused by rain on snow 70% area greater than 1,700 feet.	Perennial flow. Flow variations due to rainfall. Major events are usually caused by rain on snow.	Perennial flow. Flow variations due to rainfall. Major events are usually caused by rain on snow.	Gauge Data
Canopy closure (Where available)	Mean = 86%	77 % R1 and 85 % R2	Mean = 78%	ODFW

* ODFW = Oregon Department of Fish and Wildlife
** USGS = Unites States Geological Survey (Dovre Peak and Trask MTN. , 7.5 minute topographic Quadrangle)

Table 1 continued: Selected physical and hydrological components of the Upper Nestucca River and two tributaries, Bear Creek and Elk Creek

Nestucca River physical attributes described by reaches (sections)of the river as defined by ODFW

Indicator	Reach 1	Reach 2	Reach 3	Reach 4	Reach 5	Reach 6	Reach 7	Elk Creek (R1)	Bear Creek (R1-2)
Slope (average)	1.2%	1.3%	1.2%	1.4%	1.9%	1.2%	1.6%	2.3%	3.7% - 2.5%
Reach Length (Meters)	1,226	3,197	2,138	5,258	1,745	5,300	7,548	6,375	2,606 - 4,821
Stream Width (Meters wetted)	10.7	7.3	8.5	7.8	9.8	8.4	5.3	6.0	5.3 - 5.2
Stream Depth (Meters wetted)	0.61	0.44	0.39	0.56	0.44	0.42	0.34	0.45	0.38 - 0.34
Active channel Width (Meters)	23.0	18.8	26.0	18.4	17.9	16.2	13.7	12.9	10.4 - 10.3
Active channel Height (Meters)	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4 - 0.4
Width/Depth Ratio (Active Channel)	57.5	47	65	36.8	35.8	40.5	34.3	25.8	26.0 - 25.8
Bed Material Size (D_{50})	cobble	cobble	gravel	cobble	gravel	gravel	cobble	cobble	gravel - gravel
Canopy Closure (% of 180 Degrees	75%	85%	78%	87%	86%	93%	94%	78%	77% - 85%
% unstable banks*	15.2%	17.1%	32.8%	13.3%	27.1%	20.1%	27.8%	78.1%	34.8% - 50.8%

* these numbers are higher than average (normal) as this data was collected the year of or year after a 100 year event (flood of 1996)

All data based on ODFW Aquatic inventory methods.

ERRATA

Environmental Assessment no. OR-086-00-02
Upper Nestucca Restoration and Enhancement Project

January 12, 2001

The Interdisciplinary Team (IDT) identified the need to update the following information in the Upper Nestucca Restoration and Enhancement Environmental Assessment (EA) dated June 9, 2000. Unless noted otherwise, the amended text does not alter the analysis and determination of effects as originally presented. The following details the changes to the EA.

Page 69, Appendix 2 - Environmental Elements

Existing EA:

ELEMENTS OF THE ENVIRONMENT	ENVIRONMENTAL EFFECT	INTERDISCIPLINARY TEAM'S COMMENTS
Fish Species with Bureau Status	Minimal Affect See Chapter 3 of the EA	Refer to Chapter 3 and Appendix 4 and 5 in the EA for a discussion of the environmental effects.

Amended EA:

ELEMENTS OF THE ENVIRONMENT	ENVIRONMENTAL EFFECT	INTERDISCIPLINARY TEAM'S COMMENTS
Fish Species with Bureau Status and **Essential Fish Habitat**	Minimal Affect See Chapter 3 of the EA	Refer to Chapter 3 and Appendix 4 and 5 in the EA for a discussion of environmental effects. **All effects described in Chapter 3 and Appendix 4 and 5 that occur to coho habitat apply directly to coho and chinook Essential Fish Habitat.**

Rationale: This Element of the Environment is amended to reflect recent requirements to consult with the National Marine Fisheries Service on projects that may adversely affect Essential Fish Habitat.

Page 81, Appendix 4 - Environmental Baseline on Relevant Indicators for the Oregon Coast Range Provence and Willamina Creek.

Existing EA:

Although no major barriers exist in this subwatershed, juvenile fish passage is known to be blocked at the Ginger Creek culvert at some flows.

Amended EA:

Although no major barriers exist in this subwatershed, juvenile **and adult** fish passage is known to be blocked at the Ginger Creek culvert at some flows **or conditions**.

Rationale: Discussed in the EA but inadvertently omitted from the Appendix.